

## REMARKS

Reconsideration of this application as amended is respectfully requested.

In the Office Action, claims 2-7 and 9-17 were pending and rejected. In this response, claims 14-17 have been canceled without prejudice. Claims 2, 6, 9, and 13 have been amended. Thus, claims 2-7 and 9-13 remain pending. No new matter has been added.

Claims 2, 3, 6, 9, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Cahill, U.S. Patent No. 5,581,387 ("Cahill"). In view of the foregoing amendments, it is respectfully submitted that claims 2-7 and 9-13 include limitations that are not disclosed by Cahill. Specifically, for example, independent claim 2 as amended recites as follows:

2. A method comprising:
  - establishing a plurality of transmission time slots, each time slot corresponding to one of a plurality of optical transmitters coupled to a head end via an interleaving device;
  - forming a bit interleaved optical data stream at the interleaving device based on a plurality of optical bits transmitted by the plurality of optical transmitters during a respective time slot associated with each of the optical transmitters, each of the optical transmitters transmitting only one optical bit to the interleaving device within each respective time slot, wherein each time slot has a duration of 10 nanoseconds (ns) and each optical bit is transmitted via a pulse having a pulse width of 2.5 ns; and
  - transmitting the bit interleaved optical data stream from the interleaving device to the head end over an optical network, wherein a peak power of each pulse is higher than a predetermined threshold that would cause human eye damage while an average power of pulses in the bit interleaved optical data stream is below the predetermined threshold.

(Emphasis added)

Independent claim 2 includes limitations of forming a bit interleaved optical data stream, where each of the optical transmitters can only transmit one optical bit during the respective time slot. Each time slot has duration of 10 ns and each bit is transmitted via a pulse having a pulse width of 2.5 ns. Each pulse has a peak power higher than a

predetermined threshold that would cause human eye damage while an average of power of the bits in the bit stream is lower than the predetermined threshold. It is respectfully submitted that the above limitations are absent from Cahill.

Although Cahill discloses bit or byte interleaved data stream, there is no mention within Cahill that each transmitter can only transmit one bit during the time slot. Cahill also fails to disclose the limitations that each time slot has a duration of 10 ns and each bit is transmitted via a pulse having a pulse width of 2.5 ns. Each pulse has a peak power higher than a predetermined threshold that would cause human eye damage while an average of power of the bits in the bit stream is lower than the predetermined threshold.

In the Office Action, the Examiner stated “it would have been obvious to one of ordinary skill in the art at the time of invention to choose a pulse duration and time slot width to meet the timing requirements of a typical high-speed optical network” (see, 12/3/2004 Office Action, page 6). Applicant respectfully disagrees.

The specific time slot and pulse width combination as claimed in claim 2 are not only designed for meeting the time requirements, they are also designed for safety reasons to maintain an average power of the pulses of the bit stream below a certain threshold, while allowing an individual pulse’s peak power to exceed the threshold.

In order to render a claim obvious, each and every limitation of the claims must be taught by the cited references. It is respectfully submitted that there is no mention or suggestion within the cited references, individually or in combination, of the limitations set forth above. Therefore, independent claim 2 is not anticipated by Cahill.

Similarly, independent claims 6, 9, and 13 include limitations similar to those recited in claim 2. Thus, for the reasons similar to those discussed above, independent claims 6, 9, and 13 are not anticipated by Cahill.

Given that the rest of the claims depend from one of the above independent claims, at least for the reasons similar to those discussed above, it is respectfully submitted that the rest of the claims are not anticipated by Cahill.

Claims 4, 11, 14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cahill. Claims 5, 7, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cahill in view of Dowd et al., U.S. Patent No. 6,639,931 ("Dowd"). Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cahill in view of Phillips et al., U.S. Publication No. 2002/0080444 ("Phillips"). Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cahill in view of Bloom et al., U.S. Patent No. 6,594,043 ("Bloom").

It is respectfully submitted that none of the above cited references, individually or in combination, discloses or suggests the limitations set forth above. Further, there is no suggestion within the cited references to combine with each other. It would be impermissible hindsight based on Applicant's own disclosure for such a combination. Even if they were combined, such a combination still lacks limitations set forth above. Therefore, for the reasons similar to those discussed above, it is respectfully submitted that claims 2-7 and 9-13 are patentable over the cited references. Withdrawal of the rejections is respectfully requested.


In view of the foregoing, Applicant respectfully submits the present application is now in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call the undersigned attorney at (408) 720-8300.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,

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